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THE DECISIVE HALT STRATEGY

by

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A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

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15. Abstract: **In the past year, three separate DoD level studies have emphasized the importance of aggressively responding to a crisis, thereby stopping or deterring an adversary prior to his objective, and minimizing the amount of territory that must be regained from the aggressor. By incorporating emerging technologies and new operational concepts, air & space power can enable the Joint Force Commander (JFC) to decisively halt an enemy invasion. This is accomplished by applying new technologies coupled with new operational concepts to the early phase of an enemy aggression. This strategy minimizes vulnerabilities to mass causalities by using geographically dispersed air & space forces during the early phase of a conflict when the enemy strengths/options are at a peak. Applying this strategy will allow the JFC to halt an enemy prior to his objective, seize the initiative, and dictate the pace and direction of follow on operations.**

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Global power projection provides our national leaders with the options they need to respond to potential crises.

National Military Strategy[1]

... we must have jointly trained and interoperable forces that can deploy quickly across great distances to supplement forward stationed and deployed US forces, to assist a threatened nation, rapidly stop an enemy invasion, and defeat an aggressor.

Quadrennial Defense Review.[2]

Introduction

In the past year, three separate DoD studies have recognized a potential shift in the way the United States chooses to deter and fight conflicts. These studies produced by the Quadrennial Defense Review (QDR), National Defense Panel (NDP), and the Deep Attack Weapons Mix Study (DAWMS) all point to the criticality of quickly responding to aggression. In essence, these reports emphasize the importance of aggressively responding to a crisis, thereby stopping or deterring an adversary prior to his objective, and minimizing the amount of territory that must be regained from the aggressor.[3] This quick response approach was labeled the decisive halt strategy during the Quadrennial Defense Review. A promising method of enabling this strategy is through the decisive use of air and space power. By incorporating emerging technologies and operational concepts, air and space forces can provide the JFC with the capability to decisively halt an enemy invasion through the early and sustained application of overwhelming air and space power.

The new decisive halt construct will be explored beginning with an initial review of the US traditional phased approach to warfare. This traditional strategy will then be compared to the new decisive halt strategy as enabled through the emerging capabilities

of air and space forces. Subsequent sections will address implementation of this strategy and the potential issues surrounding a shift to this new approach. The final section will provide recommendations and concluding thoughts in regard to this strategy.

US Approaches to Warfare

Traditionally, America's conflicts have been fought in three phases: halt the invading force, build up combat power while attriting enemy forces, and conduct a decisive counteroffensive . This approach has been characterized by trading space for time, followed by a large build-up of forces, and finally a massive conventional counterattack. Each of these phases have been treated sequentially and with equal urgency.[4]

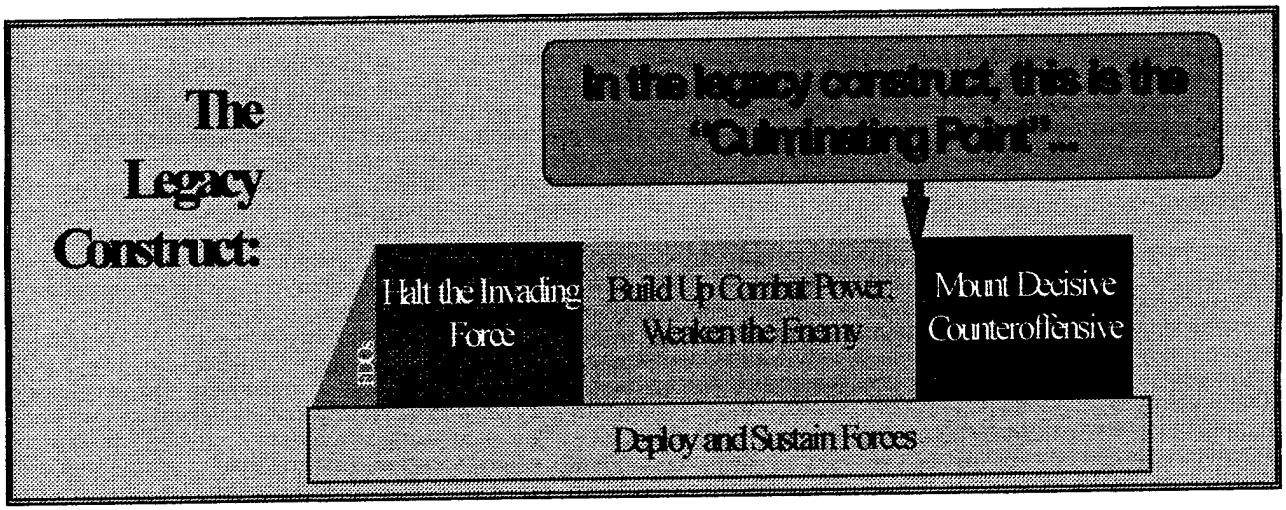

Figure 1: The Traditional View of Warfare[5] [6]

However, it is becoming more evident that this nation will face adversaries who will seek to offset the overwhelming US advantages and capabilities by using

asymmetric means. These means will include, but are not limited to, chemical/biological weapons, ballistic missiles, cruise missiles, information attacks, and anti-access strategies.[7] It is important to note that enemy anti-access strategies may attempt to prevent the US from obtaining the necessary ports and airfields for force build-up by exploiting diplomatic, economic, and informational levers of power, in addition to purely military approaches. Our traditional view of conflict, characterized by a large build-up phase and preset timelines before sufficiently weakening the enemy, increases vulnerability to these kinds of asymmetric strategies. In fact, faced with an enemy who has theater ballistic missiles, cruise missiles, capable SOF forces, or weapons of mass destruction (WMD), building up large amounts of friendly forces geographically massed in theater before the enemy has been sufficiently weakened can only help to aid an enemy's asymmetric strategy.

In light of this new view of warfare, the halting phase, not the counterattack phase, is looked upon as the conflict's decisive phase. This strategy would force an enemy past his culminating point early in a conflict by moving the emphasis to the halt phase, rather than waiting for a massive build-up of combat power and the follow on counteroffensive phase. Forcing an enemy to culmination in the initial phase of the conflict quickly diminishes an aggressor's options while simultaneously expands the JFC's options (see figure 2). This approach in turn allows the JFC to quickly seize the initiative from an aggressor. In the words of the QDR, "failure to halt an invasion rapidly can make the subsequent campaign to evict enemy forces from captured territory much more difficult and costly. It could also weaken coalition support, undermine US credibility, and increase the risk of conflict elsewhere."[8] This new paradigm will, in many

cases, provide the NCA and JFC with an opportunity to quickly take control of an emerging conflict. This approach, which leverages the inherent strengths of air and space power, can quickly concentrate forces while minimizing vulnerabilities through geographically dispersed forces - concentrating only at the decisive time and place of greatest effect. In other words, air and space power can rapidly project decisive combat power early in the conflict without projecting excessive vulnerability at a time when the enemy's strength and options are at a peak. This allows the JFC to seize the initiative, open a variety of possible follow on branches and sequels, and quickly signal our intentions. This strategy is in direct support of JV 2010's intent of "accomplishing the effects of mass - the concentration of combat power at the decisive time and place - with less need to physically mass forces than in the past."[9]

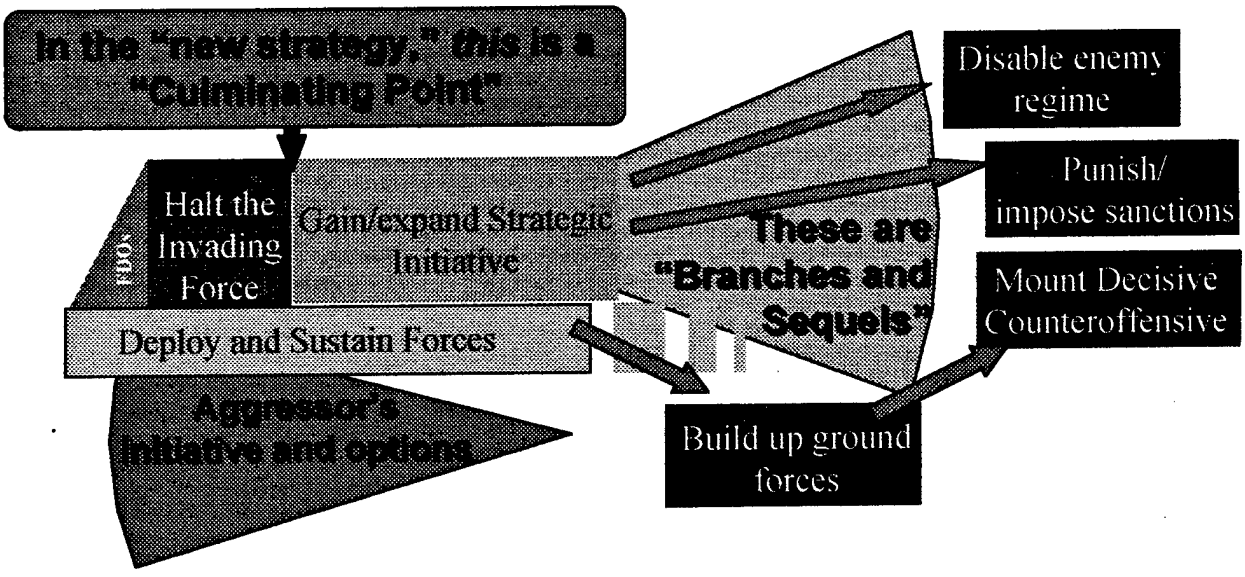

Figure 2: Decisive Halt Approach to Warfare[10] [11]

A recent historical example illustrating the potential of this strategy occurred in the battle of Khafji during Desert Storm. In late January 1991, hoping to jump start the ground war, Saddam Hussein launched a three division assault into Saudi Arabia under the cover of low ground fog. Coalition air and space forces, quickly alerted by Joint STARS aircraft, began devastating the armored columns as they moved south.[12] Lieutenant General Horner, the air component commander in Desert Storm recalled, "By the time those three divisions and 40,000 troops crossed the Saudi border, they had been so devastated, they were defeated by 5,000 Marine Corps and Saudi National Guard troops."[13] That was 1991, a time when although coalition aircraft were all-weather capable, munitions did not have the all-weather precision capabilities provided by GPS or the increased lethality of next generation cluster munitions which stand ready throughout the world and in the Gulf today.

It is this combination of emerging technologies and operational concepts which is enabling airpower to effectively execute the decisive halt strategy against large scale aggression. An example is the recent mating of the B-1B bomber and the new anti-armor cluster munition, the CBU-97. This combination allows each B-1B bomber to precisely deliver 1600 anti-armor bomblets, with each bomblet containing its own independent, self contained sensors. This equates to 1600 precision guided munitions being deposited on enemy armor formations from a single aircraft. Neither this airframe or munition were available during the Gulf War, but are available today and deployed as of this writing.

Another new munition presently rolling off the assembly line is the all-weather Joint Direct Attack Munition (JDAM). This precision guided munition uses satellite

navigation for guidance, thereby negating the effects of weather. Unlike the Gulf War, low fog or bad weather no longer provides sanctuary from the effects of precision guided munitions. Equally important is the fact that the US Air Force and Navy have committed to buying large quantities of these precision guided weapons providing the JFC with dramatically increased munition capability and lethality. For the JDAM alone, the Air Force and Navy combined have committed to purchasing 87,500 of these weapons. At $14,000 a unit, these precision guided munitions are also becoming much more economical.[14]

A third example is the recent mating of the Navy F-18 with the new Joint Stand Off Weapon (JSOW). This combination provides the F-18 with the capability to deliver lethal ordinance from a distance without putting the aircraft into high risks regions. The real pay off for this combination, however, is the fact that precision stand-off weapons reduce the number of required support aircraft. This reduced level of needed support increases the number of available airframes which can be massed for direct combat effects against an adversary.

Stealth also provides a force multiplying effect by dramatically reducing the number of support aircraft needed. This effect is especially apparent when a stealthy airframe is mated to precision munitions. During the first 24 hours of Desert Storm, it took 850 land based sorties to strike 89 targets, 246 carrier based sorties to attack 20 targets, and 45 stealth aircraft sorties mated to precision munitions to attack 76 targets.[15] Today a majority of US air-to-ground combat aircraft are now fitted or are being fitted to deliver precision guided munitions. Target planners no longer consider how many aircraft sorties it takes to destroy a target, but rather how many targets an

aircraft can destroy on a single mission. The synergistic combination of abundant precision guided munitions mated to stealthy and non-stealthy aircraft provides the JFC with a tremendous increase in the number of targets which can be covered as well as a tremendous increase in the lethality that can be applied to those targets.

Implementing the Decisive Halt Strategy with Air and Space Power

To effectively execute the decisive halt strategy, these new increased capabilities of air and space power must be used in a sound operational concept. First, the decisive halt strategy requires the early and sustained application of overwhelming air and space power during the initial stages of aggression. Secondly, the strategy must compel the adversary to stop the aggression or force the enemy to culmination, preventing the enemy from being able to continue the offensive drive. Although each scenario has its own particular set of critical vulnerabilities and centers of gravity (COGs) for achieving these effects, there are some general guidelines.

The initial target set will normally emphasize control of forces and the enemy's capacity to fight. This emphasis on destruction of command and control of enemy forces has a dual purpose. Historically, the United States has not waged war against other democratic nations but rather has fought primarily against totalitarian type regimes. Destruction of command and control for these kind of regimes not only serves to disrupt attacking forces, but also serves to attack, at the strategic level, the very control a totalitarian regime needs to keep it in power. The key is to either control or destroy the set of systems relied upon by an adversary for power and influence early in the aggression. To accomplish this requires the simultaneous application of force in time,

space, and at each level of war against key systems or COGs to disable an enemy's ability to function.[16] The focus of this concept is on the simultaneous application of force. This new capacity of air and space forces to strike multiple targets with tremendously increased lethality on a single mission enables the JFC to cover a much larger target set in a very short period of time. This allows the simultaneous targeting of tactical, operational, and strategic COGs, while seizing the initiative and creating a potentially insurmountable dilemma for the enemy. In the past, the main weakness of air power has been the inability to simultaneously target and destroy enough of the enemy's source of strength to create this kind of dilemma.

Perhaps, the best way to look upon this strategy is the "death by a thousand cuts" analogy. If a man get 30 small cuts on one arm today, the human "system" will immediately begin to repair that limb, and the man will most likely favor his other arm. The system, although somewhat weakened, will still be able to cope and continue. If, however, this same man receives 1,000 small cuts throughout his body in a short period, the human as a system is unable to cope and becomes ineffective. This same idea, enabled by the increased capacity of air and space power, applied during the early stages of a large scale aggression can achieve the goal of the decisive halt strategy. This does not obviate the need for boots on the ground. It merely applies US strengths asymmetrically to the initial phase of an enemy's aggression and minimizes US vulnerabilities through geographically dispersed forces at a time when the enemy capabilities are highest. This in turn stops an enemy aggression early in a conflict, increases the number of options available to the JFC, and decreases the number of options available to the enemy commander. It's important to consider that once the

aggression has been stopped, other levers of power such as diplomatic or economic pressure may be more effective than the application of further military force (see figure 2). Given recent experiences of US forces and the recommendation by both the QDR and NDP, these other levers of power (diplomatic, economic, and informational) are rapidly becoming part of the JFC's operational art rubric.[17]

Why This Strategy is so Important Now

One of the key issues of this new application of air and space power is born out of the fact that this is a new level of capability for the JFC. The combination of abundant, all-weather, precision guided munitions mated to a multitude of stealthy and non-stealthy platforms, combined with a synergistic construct for applying this lethality, provides a truly new option for the JFC. What makes the decisive halt strategy attractive is that, if successfully executed, it provides the JFC with an array of follow on options, all of which seize the initiative from the enemy. As discussed before, failure to halt an enemy invasion rapidly can make the subsequent operation to evict enemy forces from captured territory much more difficult, lengthy, and costly. It also has the potential to weaken coalition support, undermine US credibility, and increase the risk of conflict elsewhere.[18]

Another critical issue surrounding future conflicts lies in the asymmetric threats provided by the proliferation of theater ballistic missiles and cruise missiles coupled to WMD warheads. In each of the Service wargames last year, Global Engagement 97, Army After Next, and Navy Global, theater ballistic missiles (TBMs) tied to WMD played a significant part of the aggressor's strategy. As prescribed in Army Operations Manual

FM 100-5, the effects of these weapons, either through use or threat of use, can cause large-scale shifts in objectives, phases, and courses of action.[19] They also threaten to disrupt how the United States traditionally prosecutes a conflict. The geographical massing of land forces in an enemy theater early in the initial phases of a conflict, when enemy forces are strongest, provides a point of high risk for massive casualties. A large scale force build-up like that of the Gulf War undoubtedly will provide a clear target set for future aggressors who may seek to target and actively prevent a large build-up of forces and supplies through the use or threat of use of WMD. Air and space forces, however, are normally geographically dispersed and can be initially positioned outside the range of theater ballistic missile or cruise missile threats, thereby minimizing US vulnerability during the initial portion of the conflict. Once an enemy has been halted and his WMD infrastructure weakened, the risk to massed ground forces will be lessened. This is not to say air and space forces will completely negate the theater ballistic missile, cruise missile and/or WMD threat. It can, however, minimize the threat to a level where US cruise missile and theater ballistic missile defense systems have a much higher probability of protecting against the remaining enemy capability.

An additional strength of this option is the ability to support the evolving security environment. This evolving environment is characterized by a need for greater responsiveness and the ability to act in hours rather than weeks or months. This changing security environment has come at a time when our domestic and overseas force structure base has diminished by 38% since 1985.[20] The geographical CINC is being forced to face a growing variety of threats with a smaller conventional force structure. Air and space forces organized for this strategy can respond quickly to blunt

an enemy aggression without having to be continuously based in that theater. This leverages the global reach and flexibility air and space forces provide without bankrupting already depleted deployment and PERSTEMPO accounts.

This strategy also minimizes US vulnerability to large number of casualties early in a conflict. Many potential adversaries view the main US critical vulnerability as a high number of US casualties which would quickly undermine America's will to continue the fight. In reality, US tolerance for casualties may be tied more to the national importance of the situation which is occurring; however, this does not alter a potential adversary's strategy of attempting to maximize US casualties. The decisive halt strategy minimizes this vulnerability by applying air and space forces which inherently expose a minimum number of friendly forces to risk. In other words, the JFC can use air and space power to concentrate massive combat power early in a conflict when the enemy's strengths are highest while exposing only a relatively few aircrew members to risk.

Counter-arguments to the Decisive Halt Strategy

There are five major arguments against this kind of strategy. First, the decisive halt strategy is most effective against large scale overt acts of aggression such as an invasion. Postulated scenarios such as North Korea invading South Korea, Iran or Iraq invading Saudi Arabia, or China invading Taiwan provide examples where this strategy could be most effective. On the other hand, civil wars, guerrilla warfare, and insurgencies are not conflicts where this strategy can be readily applied. Typically the belligerents in these forms of conflict have minimal infrastructure, highly dispersed forces, and a fluid command and control structure. Environments like these do not

provide a readily attackable target set which will provide a quick ending to the conflict. It is important to note, however, that air and space forces organized to quickly respond globally with the lethality and precision of today's weapons can be very useful to the JFC in these other forms of conflict. A decisive halt may not be practical but air and space forces can provide alternative options to the JFC, as recently seen in Operation Deliberate Force in Bosnia.[21] These alternative options can include the surgical destruction of weapon caches, critical installations, and massed ground forces. They can also provide for quick projection of specialized air and space assets or the precision insertion of SOF forces. Space based and air breathing reconnaissance assets can provide near, real time intelligence on enemy activities. This kind of intelligence, coupled with airpower's inherent capability to mass quickly, provides the JFC the ability to maintain the initiative and stay inside the enemy's decision loop. The near, real time video reconnaissance of enemy troop movements and weapons cache locations provided to the Coalition JFC in Bosnia by the unmanned aerial vehicle, Predator, is an excellent example of the power and potential of this capability.

The second limitation of this strategy is the current timelines required to get decisive air and space power across the target. At present, CONUS land based air and space forces can provide weapons on target anywhere in the world in under 72 hours.[22] This timeline must be reduced and the quantity of air and space assets positioned for immediate projection must be increased to fully support the decisive halt strategy. On the other hand, it must also be understood that the idea of a fully expeditionary land based air and space force is a very new concept. The US Air Force is rapidly transitioning to a more expeditionary based force. As this transition matures and more

experience is gained, these timelines for employment will shorten. For example, the US Air Force is presently organizing its long range bomber force to put a portion on what has been called "conventional alert."[23] This reach back to the Cold War days will position CONUS based conventionally armed long range bombers on continuous alert, allowing these forces to begin blunting an aggressor's attack within hours of execution. These forces could recover back to the CONUS, in the theater, or outside of the theater depending on the infrastructure as well as the nature and range of the threat. Simultaneously, shorter range tactical air assets could be launching from CONUS to forward operating locations while naval forces steam into position, or if already in position, begin launching strikes. It is this synergy between the emerging capabilities of air and space assets, orchestrated by the JFC for the specific situation, all being concentrated in a short period of time, that underline this strategy.

A third concern in this strategy is the fact that air and space forces cannot, in most cases, complete this strategy on their own. There is still a need to put forces on the ground. Like the battle of Khafji during Desert Storm, air and space forces devastated the Iraqi forces as they moved south, but it was still necessary for a small ground force to mop up the remaining enemy forces. The use of ground forces in this manner is completely in line with the decisive halt strategy. This strategy's objective is to halt an invading force early in the conflict. As a result, this opens a variety of follow on options to the JFC while simultaneously removing the initiative from the enemy (see figure 2). These follow-on options include a number of ground operations which require rapidly deployable ground forces, if not already positioned in theater. Although the number of ground forces are dramatically reduced in most of these options, the timeline

to get them in theater is also reduced. If necessary, air and space forces could rapidly provide the lift to deploy this smaller ground force from CONUS to the conflict. These forces could include airborne, infantry, or even mechanized forces with properly pre-positioned, in theater equipment. In this way a small, rapidly projectable ground force in support of air and space forces may negate the need for a traditional build up and counterattack phase. Neutralizing aggression early in a conflict using this construct, minimizes risk with the potential to save the lives of many US ground troops.

A fourth limitation of this strategy is the prerequisite for an early political decision to use this kind of force. Typically, the longer it takes to make the political decision to use force once an aggression has started, the more difficult, lengthy, and costly a subsequent operation to evict enemy forces from captured territories will be. However, if it is assumed that this strategy will be used primarily in overt large scale aggressions, then historically political decisions to use force in these unambiguous situations has come much quicker. If the opportunity to execute a decisive halt strategy is missed, the versatility of air and space forces organized under this construct will still provide the JFC with a potent air and space element in the subsequent campaign to evict the enemy from captured territory.

Finally, it would be remiss not to discuss the issue of theater basing rights for land based air forces. Although long range air and naval assets do not require basing within theater, many of our platforms can produce much higher sortie rates which equates to dramatically increased target coverage if based at forward operating locations. This strategy assumes large scale enemy aggression. Historically, basing rights have been much easier to obtain when clear cut acts of aggression have

occurred, especially if the host nation is threatened with invasion. However, it is also critical that our basing desires be proactively addressed during normal military and diplomatic contacts to minimize this issue during times of conflict. These bases must be routinely visited by US air and space forces to both exercise our expeditionary forces as well as to normalize our presence in the region. This also provides the host nation with training, equipment and cultural exchange which helps underline the value of cooperation with the US in both times of peace and conflict.

Recommendations

There are two specific recommendations for the geographical CINC/JFC and his staff for implementing this strategy.

First, it is critical that all planning staffs remain up to date on how to apply the emerging capabilities air and space power provide to the JFC. It must be understood that the capability of air and space forces has increased tremendously since the Gulf War - where they were very successful. Many of the limitations discovered during that conflict have been since corrected. For the first time, the US now has affordable, abundant, all-weather precision munitions which can be delivered from a variety of joint platforms. This, combined with the increased lethality of these munitions linked to a concept of operations which leverages this capability, requires the JFC and his staff to understand how to apply this new capability. During the Gulf War, Lieutenant General Horner, the air component commander, conceded he was taken back by the advances in air and space forces when he said, "I don't think any of us understood airpower going into the Gulf War. We hadn't any real experience since Vietnam."[24] Once again, even

in the relatively short time since the Gulf War, emerging technologies and new operational concepts have dramatically increased the capability of air and space forces and these capabilities continue to increase today.

Secondly, it is incumbent upon the CINC's to articulate the requirement for this type of stopping force in their Flexible Deterrent Options and OPLANS. There are various fragments of this decisive halt strategy throughout the Services, especially the Air Force and Navy. Articulating this requirement will help drive a specific DoD organizational construct which will pull together the various fragments into a coherent strategy. Even if the specific conflict doesn't permit the use of the decisive halt strategy, air and space forces organized for rapid employment will be in a better position to fulfill the specific requirements of the situation and the needs of the JFC.

Summary

The decisive halt strategy provides a new capability for the JFC by leveraging the emerging capability of US air and space forces and re-prioritizing the emphasis from the counterattack phase to the initial halt phase. Implementing the decisive halt strategy will provide the JFC with the ability to halt an enemy force prior to its objective, seize the initiative from the enemy; thereby allowing the JFC to dictate the pace and direction of follow-on operations. The Quadrennial Defense Review, National Defense Panel and Deep Attack Weapons Mix Study all recognize the potential and benefits of this kind of strategy. The challenge is now for the DoD, which is steeped in the traditions and paradigms of the past, to embrace this new strategy at the same pace that the evolving security environment demands.[25] Unlike the past, the rapidly growing proliferation of

WMD will not give the US a second chance to get it right . As Machiavelli once said, "There is nothing more difficult to carry out, nor more dangerous to handle, than to initiate a new order of things." Given the risk US forces will face in the future, he might have added that there is nothing more worthwhile.

Notes

[1] Chairman of the Joint Chiefs of Staff, National Military Strategy (Washington, D.C.: September 1997), 20.

[2] Department of Defense, Report of the Quadrennial Defense Review (Washington, D.C.: May 1997), 12.

[3] Department of Defense, Report of the Quadrennial Defense Review (Washington, D.C.: May 1997), 11-13.

[4] Air Force, Air Force Doctrine Document 1 (Air Force Doctrine Pub AFDD-1) (Washington, D.C.: September 1997), 40-42.

[5] Department of Defense, Office of the Secretary of Defense QDR Strategy Paper (Washington, D.C.: March 1997). This diagram is double footnoted to illustrate this figures development. It was initially developed by OSD PA&E during the QDR to illustrate written parts of the report, but was not included in the final QDR report due to the objections by the Army. The US Air Force has subsequently used this diagram in its doctrinal publications but it originated in the QDR.

[6] Air Force, Air Force Doctrine Document 1 (Air Force Doctrine Pub AFDD-1) (Washington, D.C.: September 1997), 41.

[7] Ibid., 42.

[8] Department of Defense, Report of the Quadrennial Defense Review (Washington, D.C.: May 1997), 13.

[9] Joint Chiefs of Staff, Concept for Future Joint Operations (Washington, D.C.: May 1997), i.

[10] Department of Defense, Office of the Secretary of Defense QDR Strategy Paper (Washington, D.C.: March 1997) This diagram is double footnoted to illustrate this figures development. It was initially developed by OSD PA&E during the QDR to illustrate written parts of the report, but was not included in the final QDR report due to the objections by the Army. The US Air Force has subsequently used this diagram in its doctrinal publications but it originated in the QDR.

[11] Air Force, Air Force Doctrine Document 1 (Air Force Doctrine Pub AFDD-1) (Washington, D.C.: September 1997), 42.

[12] The moving target data sensors on the Joint Surveillance Target Attack Radar System aircraft (Joint STARS) were able to detect the Iraqi build up and subsequent probes by Iraqi armor around Khafji. This information was passed to the airborne warning and control system (AWACS) which helped coordinate concentrated coalition airstrikes against Iraqi armor units. Lt Gen Horner has called the battle of Khafji the single most important land battle of Desert Storm.

[13] James Kitfield, "To Halt an Enemy," Air Force Association, January 1998, 65.

[14] Air Force, Air Force Issues Book - 1997 (Washington, D.C.: 1997), 42, 67.

[15] David A. Deptula, "Firing for Effect: Change in the Nature of Warfare," Aerospace Education Foundation, 1997, 14.

[16] Ibid., 5.

[17] Department of Defense, Report of the National Defense Panel - December 1997 (Washington, D.C.: December 1997, 30-31.

[18] Department of Defense, Report of the Quadrennial Defense Review (Washington, D.C.: May 1997), 13.

[19] Department of the Army, FM 100-5 Operations (Washington, D.C.: 1993), 6-10.

[20] Ibid., 20.

[21] Ronald R. Fogleman. "Air Power and the American Way of War," Speech, Air Warfare Symposium, Orlando, FL: 15 February 1996.

[22] Air Force, Rapid Response Air Expeditionary Force Planning - Second Coordination Draft, 7 November 97 (Air Force Instruction 10-XXX) (Washington, D.C.: 7 November 1997), 3.

[23] John A. Tirpak, "Washington Watch," Air Force Association, December 1997, 21.

[24] James Kitfield, "To Halt an Enemy," Air Force Association, January 1998, 62.

[25] David A. Deptula, "Firing for Effect: Change in the Nature of Warfare," Aerospace Education Foundation, 1997, 19.

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